

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An update method performed by a server and a control device of a navigation apparatus for updating search data used in the navigation apparatus, the update method comprising:

providing, by the server, initial search data comprising search tree data having a tree structure and a plurality of sets of initial substance data specified based upon the search tree data, wherein the initial substance data include facility information;

providing, by the server, update search data comprising a set of update substance data separately from the initial search data without updating a set of the initial substance data in the initial search data or adding a set of initial substance data to the initial search data, wherein the update substance data are provided without any search tree data, have a non-tree index as a search key that does not require any search tree data, and include facility information; and

executing, by the control device, a substance data search by using a tree-based search based on the search tree data of the initial search data and an index-based search using the non-tree index of the update substance data, wherein-

the control device of the navigation apparatus transmits, to the server, information indicating a range of search data to be updated; and

if update search data are available over the range of search data to be updated indicated in the received information, the server provides the update search data over the range to the navigation apparatus.

2. (Previously Presented) The update method performed by a server and a control device of a navigation apparatus for updating search data used in the navigation apparatus according to claim 1, further comprising:

storing, by the control device, the update substance data having the non-tree index as the update data in the navigation apparatus separately from the initial search data.

3. (Currently Amended) A search data update system, comprising:
a navigation apparatus that uses search data; and
a search data providing apparatus that provides update search data to the navigation apparatus to be used to update initial search data, wherein:

the navigation apparatus includes a storage device at which the initial search data constituted with search tree data having a tree structure and a plurality of sets of initial substance data each specified based upon the search tree data are stored, and an update data obtaining device that obtains the update search data from the search data providing apparatus, wherein the initial substance data include facility information;

the update search data are provided in units of individual sets of update substance data, wherein the update substance data are provided without any search tree data, include attached thereto a non-tree index as a search key information to be used without any search tree data in a search in correspondence to each set of update substance data, and include facility information;

upon obtaining the update search data from the search data providing apparatus, the update data obtaining device stores the obtained update search_data into the storage device separately from the initial search data; ~~and~~

the navigation apparatus further includes a search device that executes a substance data search by using the search tree data of the initial search data stored in the storage device to execute a tree-based search and using the non-tree index attached to each set of update substance data of the update search data stored in the storage device to conduct an index-based search, in correspondence to input of a character for search;-

the update data obtaining device of the navigation apparatus transmits, to the search data providing apparatus, information indicating a range of search data to be updated; and

if update search data are available over the range of search data to be updated indicated in the received information, the search data providing apparatus provides the update search data over the range to the navigation apparatus.

4. (Previously Presented) The search data update system according to claim 3, wherein:

upon obtaining new update search data, the update data obtaining device in the navigation apparatus sorts entire update search data including the new update search data and the update search data already stored in the storage device based upon the non-tree index and stores the sorted update search data in the storage device.

5. (Previously Presented) The search data update system according to claim 3, wherein:

the navigation apparatus further includes a control device that executes navigation processing including route search and route guidance by using the initial or update substance data obtained via the search device.

6. (Previously Presented) The search data update system according to claim 3, wherein:

once a number of sets of update search data having been obtained becomes equal to or greater than a predetermined value, the update data obtaining device in the navigation apparatus provides an audio output or a display output notifying that the number of sets of update search data is equal to or greater than the predetermined value.

7. (Previously Presented) The search data update system according to claim 3, wherein:

once a number of sets of update search data having been obtained becomes equal to or greater than a predetermined value, the update data obtaining device in the navigation apparatus obtains a new version of initial search data comprising new search tree data and a new plurality of sets of initial substance data containing update substance data in the update search data, each specified based upon the new search tree data, and stores the new version of initial search data thus obtained into the storage device.

8. (Previously Presented) The search data update system according to claim 5, wherein:

the navigation apparatus further includes an input device with which a search key can be entered one character at a time, wherein:

in correspondence to each character entered via the input device, the search device advances a search executed by using the search tree data, compares the character with the

non-tree index, which is contained in each of a plurality of sets of update search data stored in the storage device, and adds a non-target flag to each set of update search data which has been determined not to be a search target based upon comparison results, wherein the non-target flag indicates that each set of update search data that includes the non-target flag is not to be compared in a subsequent index-based search.

9. (Cancelled).

10. (Previously Presented) The search data update system according to claim 3, wherein:

the update data obtaining device in the navigation apparatus transmits, to the search data providing apparatus, information related to a version of the update search data stored in the storage device; and

if a newer version of update substance data than the version indicated in the received information is available, the search data providing apparatus provides the update search data corresponding to the newer version of the update substance data to the navigation apparatus.

11. (Previously Presented) A navigation apparatus in the search data update system according to claim 3.

12. (Previously Presented) A search data providing apparatus in the search data update system according to claim 3.

13. (Currently Amended) A navigation apparatus capable of updating search data comprising:

a first storage unit at which initial search data comprising search tree data having a tree structure and a plurality of sets of initial substance data each specified based upon the search tree data are stored, wherein the initial substance data include facility information;

an update data obtaining device to obtain update search data comprising a set of update substance data from a search data providing apparatus, wherein the update substance data are provided without any search tree data, include facility information, and have a non-tree index as a search key that does not require any search tree data;

a second storage unit at which the update search data obtained by the update data obtaining device are stored separately from the initial search data; and

a search device that executes a substance data search by using the search tree data of the initial search data stored in the first storage unit to execute a tree-based search and the non-tree index attached to each set of update substance data of the update search data stored in the second storage unit to execute an index-based search, wherein-

the update data obtaining device transmits, to the search data providing apparatus, information indicating a range of search data to be updated; and

the update data obtaining device obtains update search data over the range of search data from the search data providing apparatus, if the update search data are available over the range of search data.